US Army Corps of Engineers®
New England District

Update Report for Vermont

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BUILDING STRONG®

Introduction/Mission

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Both the New England and New York districts provide service to the residents of the Green Mountain State. New England District is responsible for all civil works activities within the Connecticut River Basin, while New York District *(http://www.nan.usace.army.mil)* handles activities in the Lake Champlain drainage area. The New England District is responsible for the entire state for the Regulatory and Defense Environmental Restoration Programs, all Emergency Operations and is the Corps' lead for the Planning Assistance to States Program. This division of responsibility between the New York and New England districts is seamless to our customers, because the Corps strives to provide access to all our capabilities through a "One-Door-to-the-Corps" policy. Unless specifically noted, all activities included in this report are managed by the New England District.

The missions of the New England District, U.S. Army Corps of Engineers, include flood risk management, emergency preparedness and response to natural disasters and national emergencies, environmental remediation and restoration, natural resource management, streambank and shoreline protection, navigation maintenance and improvement, support to military facilities and installations, and engineering and construction support to other government agencies. The six New England states cover 66,000 square miles and have 6,100 miles of coastline, 13 deep water ports, 102 recreational and small commercial harbors, 13 major river basins, and thousands of miles of navigable rivers and streams. The district operates and maintains 31 dams, three hurricane barriers and the Cape Cod Canal. Through its Regulatory program, the district processes nearly 4,000 applications per year for work in waters and wetlands of the six-state region. We employ about 510 professional civilian employees, with about 300 stationed at our headquarters in Concord, Mass. The other Corps of Engineers employees serve at Corps projects and offices throughout the region. For information on the New England District check the website at: www.nae.usace.army.mil or on Facebook: http://facebook.com/CorpsNewEngland; or on Twitter: http://twitter.com/corpsnewengland; or on Flickr: http://www.flickr.com/photos/corpsnewengland.

Environmental Restoration

LAKE CHAMPLAIN SEA LAMPREY BARRIERS, VT & NY- In cooperation with the U.S. Fish and Wildlife Service, *the Vermont Agency of Natural Resources (VANR),* and the Lake Champlain Basin Program, New York and Vermont, the New York District conducted *the initial* site visit Aug. 31, 2004. A preliminary restoration report *was* finalized. *A project management plan was initiated in 2005. Due to delays in identifying a non-federal sponsor the study was put on hold temporarily. Renewed interest and support by VANR has resulted in the identification of a study area on the LaPlatte River near Shelburne. A site visit in 2010 now will allow the team to work toward completing the* Project Management Plan.

LAKE CHAMPLAIN WATERSHED, VT & NY – The New York District coordinated with the Lake Champlain Basin Program (LCBP) on the establishment of an environmental restoration program that was authorized by Section 542 of the Water Resources Development Act of 2000. The program provides assistance to Vermont and New York with planning and project implementing to improve water quality in Lake Champlain as well as ecosystem restoration projects in the entire Lake Champlain Watershed. The program is cost shared at 65 percent federal and 35 percent nonfederal. The New York District in partnership with the LCBP prepared a General Management Plan (GMP), which defines the selection and implementation process of projects to be accomplished under this program. The GMP was updated in June 2007. Vermont projects include: 1) the Jewett & Stevens Brook Marsh Phosphorous Treatment Study in St. Albans, VT. A scope of work has been developed and the project partnership agreement is under review. 2) the Potash Brook Tributary Three in South Burlington, VT, which is scheduled for construction in 2011; and 3) the Bartlett Brook North Stormwater Treatment Project in South Burlington, VT. The scope of work has been developed and the project partnership

agreement is under review. There are additional projects and studies in New York as part of this watershed effort. For more information on all these projects go to the New York District website at: http://www.nan.usace.army.mil/project/index.php?VT

MAD RIVER, WARREN – The New York District determined that federal interest in a Section 205 (flood damage reduction) study was not warranted. A Section 206 (aquatic ecosystem restoration) study was recommended, for which study the local sponsor sent a letter of support. The preliminary restoration report recommended removal of the dam and the associated sediments and approximately 2,000 linear feet of channel restoration. New York District *completed* the planning, design and analysis phase. A project cooperation agreement (PCA) execution is dependent upon the town of Warren's decision to proceed with the project. Dam removal has become a public issue. Uncertainties in the project future have put the project on hold.

POTASH BROOK, SOUTH BURLINGTON – *Potash Brook flows through developed portions of South Burlington until emptying into Lake Champlain at Shelburne Bay. Reduced groundwater flows and unmanaged runoff associated with development has degraded aquatic habitats along Potash Brook. Implementation of a balanced restoration plan that includes wetland creation, stream stabilization, bioengineering and other techniques will result in improved habitat conditions in the entire watershed. The New York District is conducting a Section 206 (aquatic ecosystem restoration) study. New York District has completed a preliminary restoration plan (PRP). The city of South Burlington has agreed to act as the non-Federal sponsor in the feasibility phase of this project. The study was previously suspended due to funding shortfalls but is scheduled to be re-initiated. A Project Management Plan will be developed once funding is received.*

WILD BRANCH, WOLCOTT - The New York District conducted a site visit along with state officials to assess flooding problems and opportunities for environmental restoration along the Lamoille River. The Lamoille watershed forms part of the drainage divide, which separates the Connecticut and St. Lawrence River Basins. Based upon initial findings and a letter of support from the Vermont Environmental Conservation Department, a Section 206 study (aquatic ecosystem restoration) has been initiated for the Wild Branch of the Lamoille River in Wolcott. The New York District completed a preliminary restoration report, which determined that there is federal interest in continuing into the feasibility phase of study. Funds were provided in FY09 to prepare a Project Management Plan and initiate a feasibility study. The draft Project Management Plan was sent to Vermont Agency of Natural Resources for review and a decision on whether to continue a project at this location.

Support to the EPA

WORK FOR THE ENVIRONMENTAL PROTECTION AGENCY - The New England District is designated as the Corps of Engineers total support agency for the Environmental Protection Agency's (EPA) Region I (New England) Superfund program for those federal-lead projects assigned to the Corps by EPA. This includes responsibility for design and/or construction execution of remediation projects. In addition, the District is providing technical assistance upon request to EPA New England for other federal-lead projects assigned by EPA to private firms as well as for some potentially responsible party (PRP) remediation.

Superfund

ELIZABETH MINE SUPERFUND SITE, SOUTH STRAFFORD – The site is an abandoned copper and iron-sulfate mine that operated from 1806 until its closure in 1958. The operations consisted of open-pit type mining. The mine workings were abandoned without any closure measures to restrict access or prevent runoff from entering the mine. In addition, there are about 40 acres of exposed tailings piles which are still producing acid mine drainage. This acid runoff is causing water quality problems in receiving waters of the drainage, Copperas Brook, and downstream in the West Branch of the Ompompanoosuc River.

New England District was approached by the EPA in 1999 to assist in characterization of the Acid Mine Drainage issues at this site. In 2002, New England District began environmental and engineering studies that have supported several response actions by the EPA. To date, New England District has stabilized the large mine tailing piles, diverted surface and groundwater away from acidic mine waste, consolidated the mine waste in preparation for future capping, and is operating a treatment plant to reduce iron load to the West Branch Ompompanoosuc River during construction activities. Mine waste will be relocated and graded for future cap installation. Construction of a cover system to seal the mine waste from rainfall and runoff will begin in 2011. Total costs to date for this work exceed $50 million. Remaining design and construction work to permanently close the abandoned mine is expected to last 3-4 more years at a cost of $15-20 million.

Defense Environmental Restoration

This Congressionally directed program (PL 98-212) provides for an expanded effort in environmental restoration. It emphasizes the identification, investigation and prompt cleanup of hazardous and toxic waste;

unexploded ordnance; and unsafe buildings, structures and debris at current and former military facilities. Site and project eligibility investigations have been completed at all 13 formerly used defense sites in Vermont, including nine where no work was found to be necessary. Of the four sites where work was needed, remedial actions for the remaining four have been completed. They are formerly used facilities at **Burlington International Airport, Fort Ethan Allen in Burlington,** and the **St. Albans** and **Lyndonville Air Force stations.** Follow-up investigations at the **St. Albans** and **Lyndonville Air Force stations** are currently underway. Johnson Company has completed a remedial investigation for groundwater at the site and is currently completing remedial investigations of various contaminated soil areas identified during a Brownsfield investigation at St. Albans Air Force Station. A sampling plan was submitted and a field investigation was completed in 2010. A remedial investigation report, including risk assessment, will be submitted in early 2011. For the Lyndonville Air Force Station, field work was completed in July 2008 (to address remedial investigation data gaps), with an additional investigation (to define the boundaries of a solid waste disposal area) performed in September 2009. The remedial investigation report, including risk assessment, will be submitted in early 2011.

FUDS Investigations — The Corps is conducting Site Inspections of Formerly Used Defense Sites (FUDS) to determine if any munitions and explosives of concern (MEC) or munitions constituents (MCs) are present on property formerly owned or leased by the Department of Defense. Many of the sites visited during this project may not have been used since the World War II timeframe, or their use changed when the property was transferred to another branch of the military or other private or public landowners. Alion Science & Technology, Inc. is assisting the Corps' Baltimore District in performing this evaluation at FUDS in the Northeast region. Alion and the District will review historical records and maps, meet with site regulators and key stakeholders, and conduct field inspection activities in the area(s) of interest. The outcome from these Site Inspection activities will be to determine if the project site poses any threat to human health or the environment, and if further work needs to be done either through a Remedial Investigation/Feasibility Study (RI/FS) or some type of removal action. Presently funded site inspections are in Maine, Rhode Island, Connecticut and Massachusetts.

Planning Assistance

Cost sharing (50/50) for the Section 22, Planning Assistance to States Program has presented challenges to the state in identifying funds that would be used for the nonfederal contribution. The state's interest in the program continues, and it plans to identify future needs within the state of Vermont.

Flood Damage Reduction

WINOOSKI RIVER, MONTPELIER, VT – The New York District completed a Project Management Plan (PMP) with the city of Montpelier. In 1996, the Winooski River Flood Damage Reduction Reconnaissance Study was completed, but did not progress into the Feasibility phase. As a result of a potentially serious freezeup ice jam event in January 2006, the city of Montpelier, expressed renewed interest in carrying the study forward into the feasibility phase. NY District has held several meetings with city and state officials to discuss problems, opportunities and constraints and what differences exist between current conditions and conditions that existed at the time the 1994 Reconnaissance Study Report was completed. The PMP is a plan to update the information in the 1994 Reconnaissance Phase, shift focus to ice-jam induced flood damages, remove focus on fluvial flood damages and complete a feasibility study. *A Feasibility Cost Sharing Agreement was executed in February 2010. Work began in the summer of 2010 with the initial tasks being performed by the city of Montpelier as part of its cost-share requirements. For more project information go to the New York District website at: http://www.nan.usace.army.mil/project/vermont/factsh/pdf/winooski.pdf*

Flood Plain Management

DAM BREACH ANALYSIS, LAKE CHAMPLAIN DRAINAGE AREA - The New York District in conjunction with the state of Vermont, has used the Flood Plain Management Services (FPMS) program to conduct dam breach analyses throughout the Lake Champlain drainage area. Over the past decade, the District has prepared 32 such studies. Currently, funding is being pursued for several FPMS studies including East Long Pond Dam, Mackville Pond Dam, Warren Lake Dam, Lake Hardwick Dam, Nichols Pond Dam, Stevens Brook and Rugg Brook. Check *http://www.nan.usace.army.mil.*

FIRST FLOOR ELEVATION SURVEYS LUDLOW, WATERBURY AND CHELSEA - The state of Vermont requested the New England District to conduct, under the Flood Plain Management Services (FPMS) program, an investigation of first floor flood elevations for Ludlow, Waterbury and Chelsea. The study involves performing a first floor elevation survey of structures located within the 100-year floodplain for designated areas within each community. The surveyed data (first floor elevation, address, low ground elevation) is given to the state floodplain coordinator as well as an orthophoto-based

map showing the properties surveyed. Fiscal year (FY) 2005 funds were used for the village of Chelsea. The survey for Chelsea was completed and a report mailed to the state. FY-06 funding was used to survey parts of the town of Waterbury. Future funding will be used to survey Waterbury and Ludlow effected properties.

DAM BREACH ANALYSIS, MINARDS POND DAM - This Flood Plain Management Services (FPMS) study is a year-to-year effort where the District completes dam failure analyses for the Vermont Agency of Natural Resources, Office of Dam Safety. The FY 2003 analysis focused on the Lake Ninevah Dam in Mount Holley. The analysis was completed and the final report and flood maps have been provided to the state. The analysis for Minards Pond Dam in Rockingham was initiated in 2005. FY-06 funding was used to complete cross-section surveys of the Halladay Brook and Minards Pond dam. FY-11 funding will be used to complete the hydrologic and hydraulic analysis.

Regulatory Activities

STATUS OF PROGRAM - Department of the Army permits are required from the Corps of Engineers under Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act. The Corps reviews permit applications for work affecting navigable waters under its Section 10 authority and the discharge of fill material into all waters, including inland wetlands, under Section 404. A list of Monthly General and Individual Permit Authorizations is provided at www.nae.usace.army.mil/reg under the heading "General Permit Authorizations and Individual Permits." Relevant environmental documents are available upon written request.

PROGRAMMATIC GENERAL PERMIT - The New England District has comprehensive Programmatic General Permits (PGPs) in place in each of the six New England states covering work with minimal impact on the aquatic environment. Up to 98 percent of all permits issued in New England are PGPs. The PGPs are based on the state thresholds for most categories of environmental impacts and applicants generally need only file with the state. The federal screening is virtually transparent to applicants and the PGP approval is either included in the state approval letter or mailed simultaneously. Applications appropriately covered under the PGPs are generally approved in less than 60 days. Applicants have commented favorably about the simplicity, predictability and efficiency of the PGPs. The Vermont GP was re-issued on Dec. 5, 2007.

AGRICULTURAL CONVERSIONS – We continue to investigate unauthorized conversion of wetland to cropland in Franklin County. The Corps continues to provide one-on-one help to farmers applying for permits and is available for group outreach/educational meetings to assist the Vermont farming community in understanding the permit process.

MIDDLEBURY RAIL SPUR - The Federal Highway Administration (FHWA) is preparing an environmental impact statement (EIS) for the Vermont Agency of Transportation's proposed Middlebury Rail Spur in Middlebury. The Corps is a cooperating agency. The draft EIS was released on April 23, 2007 and a public hearing was held on June 7, 2007. The Corps Public Notice expired on June 29, 2007. The FEIS was released on Nov. 12, 2008. FHWA's Record of Decision was issued in January 2010. A permit decision is pending conceptual design of compensatory mitigation and is expected in late summer 2011.

VERMONT AGENCY OF TRANSPORTATION CIRC-WILLISTON HIGHWAY - This project involves the construction of a regional four-lane bypass highway from I-89 in Williston to Vermont Route 117 in Essex, VT. The Corps, U.S. Environmental Protection Agency (EPA), U.S. Fish & Wildlife Service (FWS), and state resource agencies participated in the preparation of an environmental impact statement (EIS) for the entire Chittenden County Circumferential Highway project in the mid-1980s. With the consensus of EPA and FWS, the project was split into three segments for purposes of permitting: Segment 1 - I-89 in Williston to VT Route 15 in Essex; Segment 2 - VT Route 15 in Essex to VT Route 2A in Essex (this segment also includes a connector road from VT Route 2A to Susie Wilson Road in Essex); and Segment 3 - VT Route 2A to VT Route 127 in Colchester. Two lanes of Segment 1 from VT Route 117 to VT Route 15 and two lanes of Segment 2 have been constructed. The entire project was permitted by the Corps. The final EIS was issued in 1986.

A final environmental assessment (EA) re-evaluating Segments 1 and 2 was released for comment in 2003. Several environmental groups appealed the EA to federal court. In May 2004, the district federal court ruled that the environmental documentation on the project was insufficient and that a new or supplemental EIS was necessary. The Federal Highway Administration (FHWA) and the Vermont Agency of Transportation (VTrans) are preparing a new EIS for Segments 1 and 2 of the project, now referred to as Circ-Williston.

The Corps is a cooperating agency. The draft EIS was released on July 31, 2007. The Corps Public Notice (PN) was issued in September 2007, and a joint Public Hearing was held on Oct. 4, 2007. Comment periods for the DEIS and PN expired on Nov. 21, 2007. Additional compensatory mitigation sites have been identified. The Corps made a LEDPA determination on July 6, 2010 and a revised PN describing the proposed mitigation, design changes since the previous PN, and our LEDPA decision expired in October 2010. FHWA has released their FEIS.

Both EPA and USFWS have recommended denial of the permit. EPA has initiated the field level procedures of the 1992 Memorandum of Agreement between EPA and the Corps regarding Section 404(q) of the Clean Water Act.

VERMONT AGENCY OF TRANSPORTATION CROWN POINT BRIDGE - The Crown Point Bridge across Lake Champlain between Addison, Vermont, and Crown Point, New York, was opened in 1929. On Oct. 16, 2009 it was closed to all traffic, both vehicular and pedestrian, due to deterioration of two or more of the existing concrete piers. The bridge carried about 3,400 vehicles per day, many of those New York residents employed in Vermont and farmers with acreage on both sides of the lake.

Alternative routes are a ferry crossing 15 miles south of the bridge, a ferry crossing about 25 miles north or a 90-mile detour via a bridge between Fair Haven, Vermont, and Whitehall, New York. Repairs to the bridge had been planned for 2013, with New York State Department of Transportation (NYSDOT) and Federal Highway Administration-New York (FHWA-NY) taking the lead for environmental documentation and permitting.

Crown Point, New York, is the site of Fort Crown Point, a National Historic Landmark. The Vermont side of the current crossing is listed on the National Register of Historic Places.

The bridge was demolished on Dec. 18, 2009. Two-slip ferry terminals just south of the bridge on the New York and Vermont sides of the lake were constructed and opened for service on Feb. 1, 2010. New England District and New York District authorized these ferry terminals on Dec. 2, 2009. Construction of the new structure commenced in July 2010. NYSDOT has the lead on construction of the new bridge. We issued a permit for a temporary causeway/crane pad to facilitate removal of the demolished bridge from the lake and construction of the new bridge in January 2010. A similar structure was permitted on the New York side of the lake. A U.S. Coast Guard permit was issued for the structure.

A Memorandum of Agreement has been completed between NYSDOT, Vermont Agency of Transportation (VTrans), FHWA, New York State Historic Preservation Office (NYSHPO), Vermont State Historic Preservation Office (VTSHPO), New York Department of Environmental Conservation (NYSDEC) and the Advisory Council on Historic Preservation (ACHP) to address impacts of the project to historic properties. Joint compliance inspections are routinely made, as well as weekly conference calls. The bridge is scheduled to be completed in the fall of 2011.

Interagency and International Support

WORK FOR THE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT - The Corps of Engineers has entered into an interagency agreement with the Department of Housing and Urban Development. In accordance with the agreement the Corps of Engineers performs physical inspections, contract administration reviews, drawings and specifications reviews, and final inspections for Housing Authorities located throughout the state of Vermont.

DHS BORDER PATROL STATIONS (2nd CD) – *The Department of Homeland Security (DHS) through the DHS Architect - Engineer Resource Center located at the Corps' Fort Worth District, in Fort Worth, Texas, has tasked the New England District to provide Border Patrol Stations in Beecher Falls and Swanton, Vermont. The Corps anticipates completing the design and initiating construction for Border Patrol Stations in Beecher Falls and Swanton, VT, respectively, in June 2011. The total cost for design and construction of these Border Patrol Stations is approximately $27.5 million.*

DHS LAND PORT OF ENTRY — *The Department of Homeland Security (DHS) through the DHS Architect - Engineer Resource Center located at the Corps' Fort Worth District, in Fort Worth, Texas, has tasked the New England District to provide a Land Port of Entry in Richford, Vermont. The Corps anticipates completing construction of a $7.6 million Land Port of Entry in Richford in August 2011.*

Special Studies

AQUATIC PLANT CONTROL PROGRAM - Authorized by the River and Harbor Act of 1958, the Aquatic Plant Control Program for Lake Champlain provides for the control and eradication of aquatic plants in navigable waters, tributary streams, connecting channels and other allied waters in the interest of navigation, flood control, drainage, agriculture, fish and wildlife conservation, public health, and related purposes. Approximately 1,615 acres of aquatic plants, water chestnuts and Eurasian water-milfoil infest the Lake Champlain Basin. Unharvested acreage of these foreign plants is a constant source of future infestation and requires removal, since they have adverse effects on navigation and the ecosystem, especially native aquatic plants. Funds were allocated to the New York District in FY2007 to continue conducting similar cost-shared (50-50) planning and control operations work within the Lake Champlain Basin. *FY10 federal funds in the amount of $500,000 were used by NY District to continue the Aquatic Plant Control Program (APC) with the state of Vermont in the Lake Champlain Basin. Areas of interest for FY10 were coordinated with the state of Vermont. The*

FY10 APC Project Partnership Agreement was executed in July 2010 and work was completed in September 2010. FY11 funds in the amount of $500,000 will be used to conduct a similar APC program for the Lake Champlain Basin. For more information go to the New York District webpage at: http://www.nan.usace.army.mil/project/vermont/factsh/pdf/aquatic.pdf

BURLINGTON HARBOR OIL BOLLARDS REMOVAL – The New York District has initiated efforts with the city of Burlington, Vermont, to complete a design document, execute a project partnering agreement (PPA), and initiate project implementation for removal of eight *oil* bollards (*also called oil dolphins that are* gravel filled steel sheet pile cells and timber pile clusters) located in Burlington Harbor, Vermont, that were formerly used in support of operations for loading and unloading petroleum products.

Removal of these *oil dolphins* will eliminate a potential obstruction to navigation caused by continued deterioration of these obsolete structures. *Work has begun on gathering existing data including pipeline investigations and diving surveys. Construction is scheduled for the summer of 2011.*

For more information on this project go to the New York District webpage at: http://www.nan.usace.army.mil/project/vermont/factsh/pdf/BurHbrOM.pdf.

CONNECTICUT RIVER ECOSYSTEM RESTORATION STUDY – Authority to conduct an ecosystem restoration study along the Connecticut River in New Hampshire and Vermont was provided through a resolution adopted by the Committee on Environment and Public Works of the U.S. Senate on May 23, 2001. FY2002 appropriations provided the Corps with funds to initiate the investigation, which was done in February 2002. The reconnaissance study was completed in August 2002 with the assistance of the Connecticut River Joint Commissions, the Vermont Department of Environmental Conservation, the New Hampshire Department of Environmental Services, the U.S. Fish and Wildlife Service and the Natural Resources Conservation Service.

The reconnaissance report identified several ecosystem restoration opportunities along the main stem of the Connecticut River. The Connecticut River Joint Commissions was unable to obtain their share of the feasibility study funds so further efforts to finalize this study scope and execute a cost sharing agreement were suspended. In the meantime, The Nature Conservancy (TNC) expressed an interest in expanding the scope of study to the West (VT) and Ashuelot rivers (NH). Approval to expand the scope of the reconnaissance report was provided and the supplemental reconnaissance information was approved by Corps headquarters in February 2005. A feasibility cost sharing agreement and project study plan were signed by the Corps and TNC in August 2005. However, that agreement was determined to be inconsistent with then current policy.

Since then the Water Resources Development Act of 2007 authorized the Corps to partner with The Nature Conservancy, retroactive to the 2005 agreement. Funding was provided in the Corps 2008 budget to begin the feasibility study, which has been expanded to include the entire watershed. *The study will investigate alternatives to managing flow for the 70 largest dams in the basin with the goal of improving aquatic habitat while maintaining human uses such as flood control, hydropower, water supply and recreation. Operation and optimization models of the basin have been developed. The alternatives analysis will begin in 2011.*

CONNECTICUT RIVER FLOOD CONTROL DAMS - The New England District initiated efforts to evaluate various structural modifications to the five Corps of Engineer dams in Vermont to determine the most effective way to provide fish passage and to better regulate flow and water temperature releases to mitigate downstream impacts on aquatic habitat and fisheries. Our initial efforts involved coordinating the scope for the report with the Vermont Agency of Natural Resources (VT ANR) and the U.S. Fish and Wildlife Service (USFWS). We have coordinated an agreed to scope of work with the above cited agencies.

The evaluation report to address the agreed to scope of work was completed in March 2007. Comments were submitted in May 2007 by VTANR and USF&WS on the March 2007 report. Comments were addressed and incorporated into a final Evaluation Report issued in July 2007.

Flood Risk Management Dams, Recreation and Natural Resources Management

The New England District has constructed, operates and maintains five flood risk management project dams in Vermont. In addition to flood risk management activities, the Corps also manages the natural resources at these projects for multiple uses such as recreation and wildlife management. Information on each is provided below.

The Corps of Engineers is responsible for the conservation of natural resources held in public trust at civil works water resources projects. Recreation areas at the 31 federal flood risk management projects and the Cape Cod Canal within New England are managed for multiple uses. In some areas, management is delegated

to the states for specific purposes, e.g., campgrounds, wildlife management and forestry. Recreation areas at these facilities are generally open from mid-May to mid-September. The Corps also works with state and local officials and the public to ensure that the Corps projects meet their recreation and natural resources needs.

For more information on Corps recreation in New England check the website at www.nae.usace.army.mil and select "recreation" or for Vermont projects go directly to the link at http://www.nae.usace.army.mil/recreati/vermont.htm.

BALL MOUNTAIN LAKE on the West River in Jamaica was constructed at a cost of $11 million in 1961. The 915-foot-long, 265-foot-high dam can impound a 54,600-acre-foot reservoir, which is equivalent to 17.8 billion gallons of water. During the 1987 floods, Ball Mountain Dam utilized 100 percent of its storage capacity and prevented damages of $18.3 million. Since it was placed in operation in 1961, it has prevented damages of $135.9 million.

The reservoir area offers fine recreational opportunities, including swimming, picnicking, fishing, hunting, canoeing, nature study and camping at Winhall Brook Camping Area in South Londonderry. This popular camping area offers 111 sites for tent or RV campers; some sites have hookups and others have lean-to shelters for rent. Ball Mountain welcomes over 130,000 visitors each year.

For more information call (802) 874-4881 or visit the website at http://www.nae.usace.army.mil/recreati/bml/bmlhome.htm.

NORTH HARTLAND LAKE on the Ottauquechee River in Hartland was completed in 1961 at a cost of $7.3 million. The 1,640-foot-long, 185-foot-high earthen structure can impound a 1,100-acre lake capable of storing 23.2 billion gallons of water, and the facility has prevented damages to date of $113.2 million. More than 377,000 visitors annually enjoy picnicking, swimming, fishing, hunting, hiking, and snowmobiling available at the 1,467-acre North Hartland reservation.

The New England District and the state of Vermont are partners in the management of the reservoir. Vermont manages Quechee Gorge State Park in the upper third of the reservoir and provides a campground, picnic facilities and trails for the visiting public.

The New England District operates a large day-use area on the shore of North Hartland Lake with a developed beach area, picnic facilities and trails. The Corps maintains an interpretive display in the Quechee Gorge Visitor center, which was constructed in 2005. The Corps has volunteers help staff the center and offers a computer that allows the public to access the Corps webpage. For more information call (802) 295-2855 or check the website at http://usace.nae.army.mil/recreati/nhl/nhlhome.htm.

NORTH SPRINGFIELD LAKE on the Black River in North Springfield was completed in 1960 at a cost of $6.8 million. The 2,940-foot-long, 120-foot-high earthen dam can impound a 1,200-acre lake, capable of storing 16.5 billion gallons of water. Nearly $110.8 million in flood damages have been prevented by North Springfield Dam. Picnicking, swimming, hiking, hunting, fishing and snowmobiling are enjoyed at the 1,372 acres of land and water by more than 30,000 visitors each year. For more information call (802) 886-2775 or check the website at www.nae.usace.army.mil/recreati/nsl/nslhome.htm.

TOWNSHEND LAKE on the West River in Townshend is 1,700 feet long, 133 feet high and cost $7.4 million to construct. Its lake can hold a 33,700-acre-foot reservoir with a capacity to store 10.8 billion gallons of water. During the 1987 floods, the dam utilized 100 percent of its storage capacity and prevented damages of $14.2 million. Since it was placed in operation in 1961, it has prevented damages of $115 million.

The reservoir area offers fine recreational opportunities, including swimming, picnicking, fishing, hunting, canoeing, boating and nature study and annually attracts nearly 81,000 visitors. Townshend Lake, in conjunction with Ball Mountain Lake, provides scheduled white water releases in the spring and fall. More than 800 canoeists, kayakers and rafters take advantage of each event.

For more information call (802) 365-7703 or check the website at http://www.nae.usace.army.mil/recreati/tsl/tslhome.htm.

UNION VILLAGE DAM, a dry-bed reservoir project on the Ompompanoosuc River in Thetford, is a 1,100-foot-long, 170-foot-high earthen structure capable of storing 12.3 billion gallons of water in a 740-acre lake. Construction on the $4 million dam was completed in 1950, and since that time the facility has prevented damages of more than $41.2 million. More than 41,000 visitors annually enjoy the picnicking, swimming, hiking, fishing, hunting and snowmobiling available on Union Village's 991 acres of land and water.

For more information call (802) 649-1606 or check the website at http://www.nae.usace.army.mil/recreati/uvd/uvdhome.htm.

The Corps is planning to conduct a Sediment Removal project at Union Village Dam in the fall. The major items of work for this project consist of the removal of accumulated sediment from the intake channel at the Union Village Dam in Thetford, Vermont. Clearing and grubbing areas for the construction of a temporary access road and two dewatering ponds will be required. Construction of the dewatering ponds will be accomplished using existing on-site materials. Water

accumulated in the ponds will be pumped via a hose to the spillway on the west side of the dam, if necessary. Excavation of the sediments in the intake channel will be accomplished via a clam shell crane or long-reach excavator. Once excavated from the channel, sediments will then be placed in trucks for moving to the dewatering ponds. Once the sediments are sufficiently dried in the dewatering ponds, it shall be re-excavated, placed into trucks, and driven off-site to the Elizabeth Mine in South Strafford for disposal. Trucks shall follow a prescribed route and schedule, and flaggers at key intersections shall be provided by the contractor. Seeding and restoration of the cleared areas (roads and ponds) will be required.

In addition, the Corps' New York District designed three dams in the Lake Champlain drainage area during the mid-1930s. These include **EAST BARRE DAM** on the Jail Branch of the Winooski River in Barre, **WATERBURY DAM** on the Little River in Waterbury and **WRIGHTSVILLE DAM** on the North Branch of the Winooski River in Montpelier. These dams were constructed by the Civilian Conservation Corps under the direction of the New York District and all are operated and maintained by the state of Vermont.